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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/693,653

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Andrew D. Milligan

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EXAMINER

CHANG, JUNGWON

ART UNIT

PAPER NUMBER

2454

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/693,653	Applicant(s) MILLIGAN ET AL.	
	Examiner JUNGWON CHANG	Art Unit 2454	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 March 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 11-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 11-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/25/09</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to applicant's election of claims 1-5 and 11-13. Claims 1-5 and 11-13 are presented for examination.
2. Information disclosure statement filed on 2/25/09 has been considered.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 1-5 and 11-13 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 1 and 11 recite "in application program, defining a discovery scope, defining a discovery filter, defining a callback function, initiating a search request..., in the first application programming interface, parsing the search request, retrieving service information, executing at least one low-level API call, returning the service information" that are broad enough to read on performing the steps which do not involve using a machine. The claims are directed to software per se, which is not statutory subject matter.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

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obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-5 and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berkland et al, (US 2004/0111525), hereinafter Berkland, in view of Sato et al, (US 2004/0120344), hereinafter Sato.

7. As to claim 1, Berkland discloses the invention as claimed, including a method for discovering services available in a computing environment (fig. 4; page 1, 0002), comprising:

in an application program:

defining a discovery scope (figs. 5-6);

defining a discovery filter (fig. 7); and

in the first application programming interface:

parsing the search request (page 4, 0051, "in response to receiving a WSDL description of a desired service from a client via the application program interfaces 450, identifies a port Type of the desired service and invokes the discovery mechanism");

retrieving service information corresponding to the requested discovery scope and discovery filter (page 6, claim 1, "generating a service object based on the selected candidate"); and

returning the service information to the application program (880, fig. 8; page 5, 0063, "returns the service object to the client").

8. Although Berkland discloses a search request is initiated via the application programming interface (page 1, 0013, "service requests are received from clients; page 4, 0051, "service requests from business applications received via the application program interfaces), Berkland does not specifically disclose initiating search request to a first application programming. Sato discloses initiating search request to a first application programming (figs. 4-5; page 4, 0041-0042; 0045, "discovery API is used as an interface layer between applications and UPnP enabled devices"). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teachings of Berkland and Sato because Sato's teaching would allow the API to communicate with the application to discover the presence of appropriate services, as taught by Sato (page 4, 0042-0043; claim 1).

9. As to claim 2, Berkland discloses the method of claim 1, wherein retrieving service information corresponding to the requested discovery scope and discovery filter comprises executing a call to at least one low-level API or protocol (page 5, 0063).

10. As to claim 3, Berkland discloses the method of claim 1, wherein retrieving service information corresponding to the requested discovery scope and discovery filter comprises querying a persistent data store service (fig. 4).

11. As to claim 4, Berkland discloses the method of claim 1, further comprising

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formatting retrieved service information into a consistent service entry object data format (page 1, 0009).

12. As to claim 5, Berkland discloses the method of claim 2, further comprising saving information received from the at least one low-level API or protocol in a persistent data store (page 5, 0059, “updated dynamically”).

13. As to claim 11, it is rejected for the same reasons set forth in claim 1 above. In addition, Berkland discloses a method of subscribing to service events in a computing environment, comprising:

defining a callback function (page 5, 0061); and

executing at least one low-level API call to subscribe to service events (fig. 4; page 4, 0048-0054).

14. As to claim 12, Berkland discloses the method of claim 11, further comprising formatting retrieved service information into a service entry object data format (page 1, 0009).

15. As to claim 13, Berkland discloses the method of claim 12, further comprising saving information received from the at least one low-level API in a persistent data store (page 5, 0059, “updated dynamically”).

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Jensen et al, US 2004/0261086, Murto et al, US 2004/0213409, Zhang et al, US 2005/0080768, Manzano, US 2004/0010590, Bowen et al, US 7,401,338, Simonnet et al, US 2004/0210630, Gandhi et al, US 7,085,814 disclose methods and apparatus for dynamic service discovery from web services.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JUNGWON CHANG whose telephone number is (571)272-3960. The examiner can normally be reached on M-F 6:30 - 2:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on 571-272-1915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information

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system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JUNGWON CHANG/

Primary Examiner, Art Unit 2454

June 6, 2009